Amendments to Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-26 (cancelled)

27. (new) A method for dynamically adding a device driver into a layered stack of device drivers in a computer system comprising:

suspending I/O operations for the layered stack;

unbinding an upper driver in the stack from a lower driver in the stack;

binding the device driver to the lower driver to form a layered device;

binding the upper driver to the layered device; and

restarting I/O operations for the layered stack.

28. (new) The method of claim 27 wherein the lower driver emulates a device, the device having a first device name.

29. (new) The method of claim 28 wherein upon forming the layered device, the layered device is given a second device name different than the first device name.

30. (new) The method of claim 29 further comprising exporting the layered device under the second device name to the upper driver for use in the layered stack.

31. (new) The method of claim 29, wherein the first device name and the second device name are unique to a particular stage of re-layering.

32. (new) The method of claim 29, wherein the first device name and the second device name are unique across all stages of re-layering.

33. (new) The method of claim 27, wherein the computer system is a computer storage system, and wherein the layered stack is a logical unit input/output stack.

34. (new) The method of claim 27, wherein the computer system comprises an operating system and a layered device driver registration system, and wherein the method further comprises:

registering the device driver with the operating system; and

registering the device driver with the layered device driver registration system.

35. (new) The method of claim 34, wherein the layered device driver registration system comprises a driver list and a driver order file, and wherein registering the device driver with the layered device driver registration system comprises:

adding the device driver to the driver list; and

specifying in the driver order file a relative position for the device driver within the layered stack.

36. (new) The method of claim 35, wherein adding the device driver to the driver list comprises adding a first key to a driver file maintained by the layered device driver registration system, said first key including a driver name for the device driver and a library name indicating an administrative library for the device driver, and wherein specifying the relative position for the device driver within the layered stack comprises adding a second key to a driver order file maintained by the layered device driver registration system, said second key including a driver name for the device driver and an ordinal value indicating the relative position of the device driver within the layered stack.

37. (new) A method for dynamically removing a device driver from a layered stack in a computer system comprising:

suspending I/O operations for the layered stack;

unbinding an upper driver in the stack from the device driver;

unbinding the device driver from a lower driver;

binding the upper driver to the lower driver; and

restarting I/O operations for the layered stack.

38. (new) The method of claim 37 wherein the lower driver emulates a device, the device having a first device name and further comprising exporting the device under the first device name to the upper driver for use in the layered stack.

39. (new) The method of claim 37, wherein the computer system is a computer storage system, and wherein the layered stack is a logical unit input/output stack.

40. (new) A computer program product, for use on a computer system, for managing a layered stack of device drivers, the computer program product comprising:

program code for suspending I/O operations for the layered stack;

program code for unbinding an upper driver in the stack from a lower driver in the stack;

program code for binding the device driver to the lower driver to form a layered device;

program code for binding the upper driver to the layered device; and

program code for restarting I/O operations for the layered stack.

41. (new) A computer program product, for use on a computer system, for managing a layered stack of device drivers, the computer program product comprising:

program code for suspending I/O operations for the layered stack;

program code for unbinding an upper driver in the stack from the device driver;

program code for unbinding the device driver from a lower driver;

program code for binding the upper driver to the lower driver; and

program code for restarting I/O operations for the layered stack.